AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An infrared sensor including an ROIC substrate and several pixels, comprising:

a first buffer layer on the ROIC substrate;

a bottom layer including a reflective metal layer on the first buffer layer;

a cavity for resonantly absorbing infrared ray over the bottom layer;

an upper layer including a first insulating layer over the cavity, a second buffer layer on the first insulating layer, a bolometer layer on the second buffer layer, a second insulating layer on the bolometer layer and an absorption-transmission layer on the second insulating layer; and

~~a unit pixel supporting the upper layer including more than a pair of anchors on the ROIC substrate for.~~

more than two anchors on the ROIC substrate for supporting the upper layer of the pixel.

2. (Original) An infrared sensor including an ROIC substrate and several pixels, comprising:

a bottom layer including a reflective metal layer on the ROIC substrate;

a cavity for resonantly absorbing infrared ray over the bottom layer;

an upper layer of a sandwich shape including an absorption-transmission layer having a cutting area in the middle thereof and a bolometer layer placed both on and under the absorption-transmission layer; and

anchors positioned at the edges of the pixel for supporting the upper layer and functioning as electrodes.

3. (Original) The infrared sensors as defined by claim 1 or claim 2, wherein the upper layer has a symmetric structure against a diagonal line of the pixel, and the anchors comprise first anchors and second anchors which diagonally face to each other at the ends of the pixel, wherein the second

anchors function as electrodes connected to read access terminals on the ROIC substrate and the distance between the second anchors is shorter than that between the first anchors.

4. (Currently Amended) The infrared sensors as defined by claim 1 or claim 2, wherein the distance between the ~~bolometer layer~~ reflective metal layer and the absorption-transmission layer is $\lambda/4$, where λ is the central wavelength of infrared to be detected.

5. (Original) The infrared sensor as defined by claim 2, further comprising a first buffer layer under the reflective metal layer.

6. (Original) The infrared sensor as defined by claim 1, wherein the first and the second buffer layers are made of a material comprising silicon nitride.

7. (Original) The infrared sensor as defined by claim 1, wherein the first and second insulating layers are made of silicon oxide.

8. (Original) The infrared sensors as defined by claim 1 or claim 2, wherein the reflective metal layer comprises a material selected from the group consisting of Ti and Al.

9. (Original) The infrared sensors as defined by claim 1 or claim 2, wherein the bolometer layer is made of a material selected from the group consisting of Ti, TiO_x, VO_x, and doped amorphous silicon.

10. (Original) The infrared sensors as defined by claim 1 or claim 2, wherein the absorption-transmission layer is made of a material selected from the group consisting of Ti, TiN and Cr.

11. (Original) The infrared sensor as defined by claim 10, wherein the absorption-transmission layer has a thickness ranging between 20Å and 100Å for Ti or TiN, and between 20Å and 200Å for Cr.

12. (Original) A method of fabricating an infrared sensor comprising the steps of:

forming a reflective metal layer on an ROIC substrate;

depositing a sacrificial layer on the reflective metal layer by an SOP coating and removing the upper part of the sacrificial layer by plasma;

positioning a bolometer layer and an absorption-transmission layer on the sacrificial layer;

forming via holes within the sacrificial layer, the bolometer layer, and the absorption-transmission layer;

filling a metallic material into the via holes to make anchors as electrodes; and

forming a cavity by removing the sacrificial layer.

13. (Original) The method defined by claim 12, wherein the sacrificial layer is removed by an O_2 plasma ashing process.

14. (Original) The method defined by claim 12, wherein the upper part of the sacrificial layer is removed by plasma using an Ar/O_2 gas.

15. (Original) The method defined by claim 14, wherein the thickness of the sacrificial layer removed is between 100Å and 2000Å.

16. (Original) The method defined by claim 12, wherein the bolometer layer is made of a material selected from the group consisting of Ti, TiO_x, VO_x, and doped amorphous silicon.

17. (Original) The method defined by claim 12, wherein the absorption-transmission layer is made of a material selected from the group consisting of Ti, TiN and Cr.

18. (Original) The method defined by claim 17, wherein the absorption-transmission layer has a thickness ranging between 20Å and 100Å for Ti or TiN, and between 20Å and 200Å for Cr.

19. (Original) The method defined by claim 12, wherein the formation of the via holes is performed by a plasma etching using a gas selected from the group consisting of CF_4, CHF_3 and Ar.